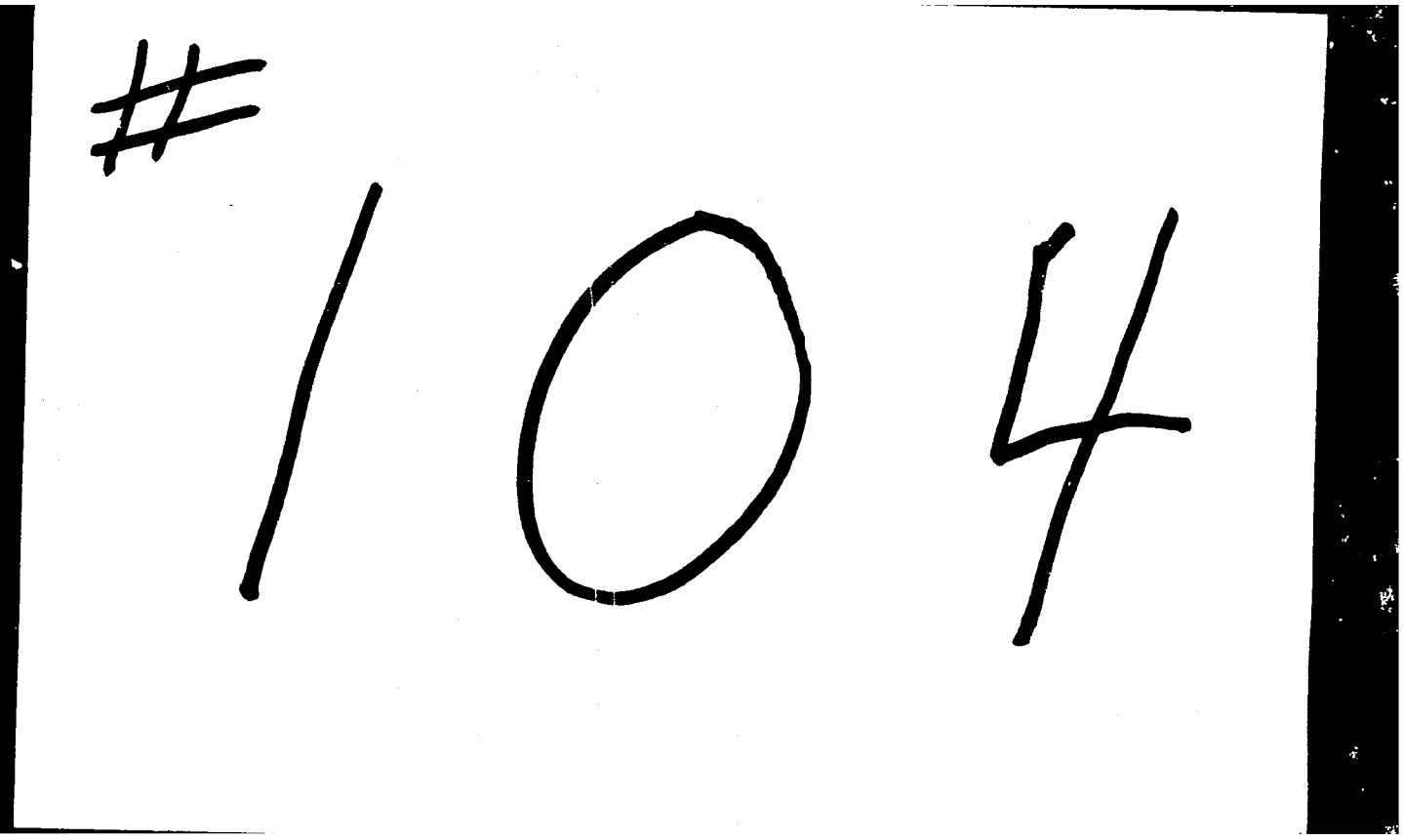
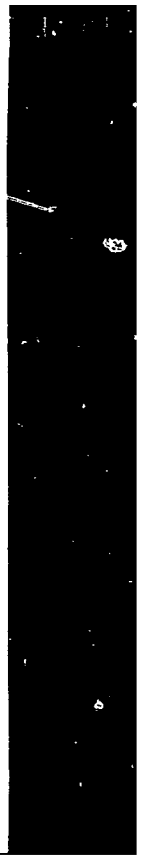
APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410410001-0"



DIKOVSKIY, I.A., inzh.

Using coarse porous concrete in constructing walls of industrial buildings. Prom.stroi. 38 no.4:54-56 '60. (MIRA 13:8)

(Irkutsk Province--Concrete walls)



DIKOVSKIY, I.A., inzh.; ROMANOV, Yu.M., inzh.

Efficient method for making lightweight concrete with agloporites. (MIRA 13:11)
Bet. i zhel.-bet. no.11:521-523 N '60.
(Lightweight concrete)

DIKOVSKIY, I.A., inzh.

Large-pore concrete made with porous aggregates. Bet.i zhel.-bet. no.6:249-254 Je '61. (MIRA 14:7)
(Lightweight concrete)

DIKOVSKIY, I.I.; MOTINA, T.I.; SUCHKOV, V.G.

Using "chromolan" for imparting water-repellent properties to leather. Kozh.-obuv.prom. 2 no.9:22-25 S '60. (MIRA 13:10)
(Leather)

DIKOVSKIY, I., instruktor peredovykh metodov truda.

Sand. dies. Stroitel' 2 no.6:1[illegible] Je '56. (MLRA 10:1)
(Concrete construction--Formwork)

ARKHIPKIN, V.; DIKOVSKIY, I.

Band instead of wheel. New heat insulator. NTO 4 no.12:43 D '62. (MIRA 16:1)
(Grinding and polishing) (Insulation (Heat))

DIKOVSKIY, I., instruktor peredovykh metodov truda.

Producing T-beams. Stroitel' no.4:11 Ap '57. (MLRA 10:6)
(Girders)

DIKOVSKIY, I.M.

Contractual relations in capital construction. Nov. tekh. i pered. op. v stroi. 20 no.1:22-23 Ja '58. (MIEA 11:2)

1.Glavnyy arbitr Ministerstva stroitel'stva RSFSR.
(Building--Contracts and specifications)

DIKOVSKIY, M.

Improving the procedure for remunerating procurement agents.
Mias. ind. SSSR 29 no.6:45 '58. (MIRA 11:12)

1.Orlovskiy myasotrest.
(Orel Province--Meat industry--Costs)

L 60448-65

ACCESSION NR: AT5017378 UR/0000/64/000/000/0019/0024

AUTHOR: Dikovskiy, Ya. M. (Novosibirsk); Krapalov, I. I. (Novosibirsk); Tsapenko, M. P. (Doctor of technical sciences, Novosibirsk)

TITLE: Relay with a single-reed magnetically controlled contact

SOURCE: Konferentsiya po avtomaticheskomu kontrolyu, i metodam elektricheskikh izmereniy. 3d, Novosibirsk, 1961. Avtomaticheskiy kontrol' i metody elektricheskikh izmereniy; trudy konferentsii, t. 2: Tsifrovyye izmeritel'nyye pribory. Elektricheskiye izmereniya neelektricheskikh velichin. Ustroystva avtomaticheskogo kontrolya i upravleniya v promyshlennosti (Automatic control and electrical measuring techniques; transactions of the conference, v. 2: Digital measuring instruments. Electrical measurements of nonelectrical quantities. Devices for automatic control and regulation in industry). Novosibirsk, Redizdat Sib. otd. AN SSSR, 1964, 19-24

TOPIC TAGS: single-reed contact, magnetically controlled contact, single-reed contact relay, switch design

ABSTRACT: After describing the existing two-reed magnetically controlled contacts used in the West, the authors describe in detail the construction of simple, miniature, universal, reliable, and technologically useful single-reed magnetically controlled

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L 60148-65

ACCESSION NR: AT5017378 0

contacts. They can be used for the switching of low-power circuits for automation, telemechanics, and measuring device technology. Relays with the newly designed magnetically controlled contacts may be used for vibro-converters, dynamic condensers, frequency multipliers and dividers, and for logical, memory, and phase-sensitive elements. Orig. art. has: 5 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 11Nov64 ENCL: 00 SUB CODE: EE, IE

NO REF SOV: 003 OTHER: 005

dwm

Card 2/2

L 30338-66 EWT(1)

ACC NR: AP6019581 SOURCE CODE: UR/0115/66/000/004/0060/0063

AUTHOR: Dikovskiy, Ya. M.; Malyshev, I. S.; Pinchuk, L. Ye.

ORG: none

TITLE: Operating characteristics of magnetic reed relays in a transverse magnetic field

SOURCE: Izmeritel'naya tekhnika, no. 4, 1966, 60-63

TOPIC TAGS: electric relay, ferrite switch

ABSTRACT: The authors describe experimental results obtained with magnetic reed relays, in which the controlling magnetic field is normal rather than parallel to the contact arms. Tests were done on two batches of ten relays each, all having the same form as in Fig. 1, except that one batch had 1.0-mm-diameter reeds while the other had 0.8-mm reeds. Reeds were of a magnetic material identified only as type

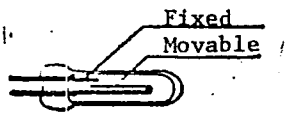

Fig. 1. Reed relay

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N-47-D5 alloy. The actuator coil consisted of 1000 turns of 0.35-mm wire wound on a 39 x 4 x 4-mm Ni-Fe core and fed from a 6—12-v d-c source. The main objective of the tests was to find the operating characteristic of the relay as a function of actuator-coil position, when the coil was moved both laterally along the relay envelope and perpendicularly across it. A sample of the curves is given in Fig. 2,

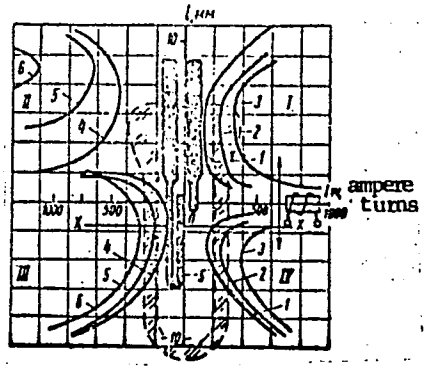

Fig. 2. Threshold operating characteristics

where the graph overlays a cross-section of the relay. The curves represent the threshold ampere-turns required for contact operation at varying distances of the coil from the reed contacts. The graph shows, for example, that maximum sensitivity occurs when the coil is in quadrant III, i.e., nearest to the movable reed, but that

L 30338-66
ACC NR: AP6019581

a greater tolerance in coil positioning can be had in quadrant I; also, a pronounced dead zone appears between quadrants I and IV. A similar family of curves was obtained for motion of the coil across the envelope, i.e., in the X-X direction of Fig. 2. From their data the authors have derived empirical design formulas for optimum coil positioning. They conclude that the cross-field design is practical and can be realized without unreasonable demands on geometry tolerances. Operating specifications of the tested relays are included. Orig. art. has: 3 figures and 6 formulas. [SH]

SUB CODE: 09/ SUBM DATE none/ ORIG REF: 002/ OTH REF: 001/ ATD PRESS: 5016

Card 3/3

DIKRAN, Martaian, ing.

Method to control the manufacturing process of plasters.
Rev constr si mat constr 16 no. 1:38-39 Ja '64.

DIKSHTEYN, A.A. (Chernovitsy)

Changes in the pituitary and in the sex glands in goiter cases in Bacovina. Probl.endok. i gorm. 2 no.1:32-34 Ja-F '56. (MIRA 9:10)

1. Iz kafedry patologicheskoy anatomii (zav. - dotsent N.M.Shinkerman) Chernovitskogo meditsinskogo instituta (dir. - dotsent M.M.Kovalev)
(GOITER,
endemic, gonadal & pituitary changes (Rus))
(PITUITARY GLAND, in various diseases,
goiter, endemic (Rus))
(GLANDS, in various diseases,
goiter, endemic (Rus))

DIKSHTEYN, A.A.

Unusual case of rupture of the aorta caused by injury. Vrach.delo no.2:191 F '57. (MLRA 10:6)

1. Kafedra sudebnoy meditsiny (zav. - dots. I.V.Kryzhanovskaya) Chernovitskogo meditsinskogo instituta.
(AORTA--WOUNDS AND INJURIES)

SHINKERMAN, N.M., prof.; DIKSHTEYN, A.A., dotsent

Work of the Chernovtsy Province Pathoanatomical Society for 1958.
Arkh. pat. 21 no.9:91-93 '59. (MIRA 14:8)

1. Predsedatel' Chernovitskogo oblastnogo obshchestva patologoanatomov (for Shinkerman). 2. Sekretar' Chernovitskogo oblastnogo obshchestva patologoanatomov (for Dikshteyn).
(CHERNOVTSY PROVINCE--PATHOANATOMICAL SOCIETIES)

SHINKERMAN, N.M., prof.; DIKSHTEYN, A.A., dotsent

Activity of the Chernovtsy Province Society of Pathoanatomists in 1961-1962. Arkh. pat. 25 no.11:85-86 '63. (MIRA 17:12)

1. Predsedatel' Chernovitskogo oblastnogo obshchestva patologoanatomov (for Shinkerman). 2. Sekretar' Chernovitskogo oblastnogo obshchestva patologoanatomov (for Dikshteyn).

L 01053-67 EWT(1)

ACC NR: AP6030953 SOURCE CODE: UR/0181/66/008/009/2566/2571 32 B

AUTHOR: Poltinnikov, S. A.; Dikshteyn, I. Ye.

ORG: Institute of Semiconductors AN SSSR, Leningrad (Institut poluprovodnikov AN SSSR)

TITLE: Magnetic spectra of $Y_{3-2x}Ca_{2x}Fe_{5-x}V_xO_{12}$ ferrites 21

SOURCE: Fizika tverdogo tela, v. 8, no. 9, 1966, 2566-2571

TOPIC TAGS: ferrite, magnetic spectrum, ferrite garnet, anisotropy, anisotropy constant, rotation, penetration, saturation magnetization

ABSTRACT: A study is made of the magnetic spectra of $(Y_{3-2x}Ca_{2x})[Fe_2](Fe_{3-x}V_x)O_{12}$ $(0 \leqslant x \leqslant 1.5)$ and $(Ca_{2.5}Bi_{0.5})[Fe_2](Fe_{1.75}V_{1.25})O_{12}$ ferrite-garnets at room temperature within a frequency range of 0.1—3100 Mc. Anisotropy constants (K_1) are computed from the rotation penetration factor, determined from the Kola-Kola diagrams, and magnetization saturation. The field of anisotropy increases considerably as M_s approaches zero. The authors express their appreciation to G. A. Smolenskiy for his interest in their work. Orig. art. has: 5 formulas, 2 tables, and 5 figures. [Authors' abstract] [SP]

SUB CODE: 20/ SUBM DATE: 07Jan66/ ORIG REF: 003/ OTH REF: 005/

Card 1/1

DIKSHTEYN, Ts. D.

Dikshteyn, Ts. D. "The treatment of 'nest baldness' with paraffin", Zdravookhraneniye Kazakhstana, 1949, No. 2, p. 9-13.

S O: U-4630, 16 Sept. 53, (Letopis ' Zhurnal 'nykh Statey, No. 23, 1949).

DIKSHTEYN, Ts.D.

Treatment of vitiligo. Vest.ven.i derm. no.2:57 Mr-Ap '53. (MLRA 6:5)

1. Alma-Atinskiy gorodskoy vendispanser No.1. (Skin--Diseases)

DIKSHTEYN, Ye.A., dotsent

Atherosclerosis and hypertension. Vrach.delo no.5:465-467 My '57.
(MLRA 10:8)

1. Kafedra patologicheskoy anatomii (zav. - prof. Sh.I.Krinitskiy) Meditsinskogo instituta v Rostove na Donu i kafedra patologicheskoy anatomii (zav. - dots. Ye.A.Dikshteyn) Stalinskogo meditsinskogo instituta

(ARTERIOSCLEROSIS) (HYPERTENSION)

DIKSHTEYN, Ye.A., Doc Med Sci — (diss) "Patomorphology and pathogenesis of vascular changes in ~~hypertonia disease~~ hypertension." [Stalino, 1959]. 24 pp (Voronezh State Med Inst), 225 copies (KL,44-58, 124)

DIKSHTEYN, Ye.A.

Changes in the aorta and elastic arteries in hypertension. Vrach delo no.9:945-949 S'58 (MIRA 11:10)

1. Kafedra patologicheskoy anatomii (zav. - prof. Sh.I. Krinitskiy) Rostovskogo na Donu meditsinskogo instituta i kafedra patologicheskoy anatomii (zav. - dots. Ye. A. Dikshteyn) Stalinskogo meditsinskogo instituta.
(ARTERIES)
(HYPERTENSION)

DIKSHTEYN, Ye.A.

Changes in the bronchial tree in pneumoconioses combined with bronchogenic cancer. Vop.onk. 7 no.3:20-26 '61. (MIRA 14:5)

(LUNGS--DUST DISEASES) (BRONCHI--CANCER)

DIKSHTEYN, Ye.A.

Pathomorphology of malignant nephrosclerosis. Trudy Inst. eksp. morf. AN Gruz. SSR 11:179-183 '63.

(MIRA 17:11)

1. Kafedra patologicheskoy anatomii Donetskogo gosudarstvennogo meditsinskogo instituta imeni Gor'kogo.

DIKSHTEYN, Ye.A., prof.; LIKHT, L.L.

Work of the Donets Regional Society of Pathologists for 1960-1962. Arkh. pat. 26 no.5:91-95 '64 (MIRA 18:1)

1. Predsedatel' pravleniya Donetskogo obshchestva patologo-anatomov (for Dikshteyn). 2. Sekretar' Donetskogo obshchestva patologoanatomov (for Likht).

DIKSHTEYN, Ye.A.; TARAKHOVSKIY, M.L.

Effect of nicobexonium and proserine on the development of experimental tumors. Vop. onk. 11 no.5:67-72 '65.

(MIRA 18:8)

1. Iz kafedry farmakologii lechebnogo fakul'teta (zav. - dotsent M.L.Tarakhovskiy) i kafedry patologicheskoy anatomii (zav. - prof. Ye.A.Dikshteyn) Donetskogo meditsinskogo instituta (rektor - prof. A.M.Ganichkin).

TKACHENKO, I.A., inzhener; DIKSHTEYN, Ye.I., inzhener; VARSHAVSKIY, A.P., inzhener; GONCHARENSKIY, A.Ya., inzhener; NIKOLAYEV, A.G., inzhener; CHERNOGRUD, P.G., inzhener.

Top casting of steel through two stopper tubes. Metallurg no.5:29-32 My '56. (MLRA 9:9)

1.Magnitogorskiy metallurgicheskiy kombinat.
(Smelting)

Dikshteyn, E.I.

AUTHOR: Goldenberg, I.B. and Dikshteyn, E.I., Engineers, Magnitogorsk Metallurgical Combine.

TITLE: New design of reversing valve. (Novaya konstruktsiya perekidnogo klapana.)

PERIODICAL: "Metallurg" (Metallurgist), 1957, No. 2, pp. 28 - 29, (U.S.S.R.)

ABSTRACT: Laboratory-scale investigations on models of the ordinary type of reversing valve used for open-hearth furnaces showed that the high pressure-drops produced were due to incorrect shape and the absence of special devices to facilitate the direction change of the gases. An improved design has been evolved in which guide vanes are provided. In model and full-scale tests this has been found to increase checker temperatures; e.g. where gas checker temperatures were 1 180 - 1 260 °C they rose to 1 240 - 1 300 °C after installing the new type valve. A 2.8% saving in coke-oven gas was thereby obtained. Ten such valves are in satisfactory service at Magnitogorsk.

1 photograph.

133-8-6/28

AUTHORS: Bezdenezhnykh, A.A. and Bigeyev, A.M. (Cands.Tech.Sci.), Dikshteyn, Ye.I., Perchatkin, P.N. and Sirotenko, A.I., (Engineers).

TITLE: The development of the deoxidation process of rimming steel. (Usovershenstvovaniye tekhnologii raskisleniya kipyashchey stali).

PERIODICAL: "Stal'" (Steel), No.8, 1957, pp.701-707 (USSR).

ABSTRACT: An investigation of factors causing substantial variation in manganese losses during deoxidation of quality low carbon rimming steels (08 кп Н, 08 кпГ, 08 кп рГ and 08 кп chemical composition is given in Table 1), produced in 400 t open hearth furnaces was carried out. The following students of MGMI participated in the investigation: V. Antipin, N.Kuskov, B.Khorshun and others. The composition of pig used varied within comparatively wide limits, % C 4.1-4.5, Mn 0.15-0.25, Si 0.65-1.0; S 0.025-0.055; P 0.085-0.150. The limits of composition of metal and slag during the individual smelting periods are given. The composition of metal before deoxidation %: C 0.06-0.09; Mn 0.04-0.09; S 0.030-0.033; P 0.007-0.010; slag: CaO 43-46; SiO_2 11-17, FeO 10-20. For the deoxidation of steel the whole required amount of ferromanganese was added to the

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The development of the deoxidation process of rimming steel. (Cont.)

both in one lot at the beginning of tapping. Some retention of steel in the furnace after the above addition was used only when ferromanganese contained more than 1% of Si. Maximum possible manganese loss was calculated using A.M. Bigeyev's formula:

$$U_{max} = \frac{77.5\ K_{Mn}(FeO)q}{100 + 0.775\ K_{Mn}(FeO)q} \qquad (1)$$

where: q - relative proportion of slag %; K_{Mn} - equilibrium constant of the deoxidation reaction [Mn] + [FeO] = (MnO) + Fe l. The dependence of maximum manganese losses in the furnace at 1600 C on the amount of slag and its FeO content is shown in Fig.1 and the frequency distribution of total manganese losses during deoxidation of low carbon rimming steel in 400 t furnaces (170 melts) in Fig.2. The maximum manganese losses during deoxidation can vary between 60 and 70% while actual losses varied from 30 to 70% (average 40-50%), therefore to obtain metal of a required composition the

The development of the deoxidation process of rimming steel. (Cont.)

influence of the following factors on manganese losses was studied. 1) The influence of retention time in the furnace after deoxidation; 2) Duration of tapping (Fig.3); 3) The influence of metal temperature before deoxidation; 4) The influence of FeO content in slag (Fig.5). This influence becomes obvious only at FeO content above 12-14%; 5) The influence of silicon content in ferro-manganese (Fig. 6); 6) The influence of carbon content of metal before deoxidation (Fig.7) and as during decarburisation of steel 08 kp ore additions are often made (1-1.5 t) not long before deoxidation, the influence of this addition was also studied (Fig.8). On the basis of the data obtained the consumption of ferromanganese for deoxidation for MMK conditions was calculated, using a formula derived by A.M. Bigeyev:

$$T_{FeMn} = 10^5 \frac{T([Mn]f \cdot\cdot [Mn]r)}{[Mn]_{FeMn} \cdot (100-U_{Mn})}$$

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where: T_{FeMn} - consumption of ferromanganese for the deoxidation of the whole charge of steel in kg.; T -

The development of the deoxidation process of rimming steel. (Cont.)

furnace capacity, tons; [Mn]f - manganese content of finished steel %; [Mn]r - residual manganese content in steel before deoxidation, %; U_{Mn} - total manganese losses (in furnace, runner and ladle), %. The frequency distribution of residual manganese content before deoxidation is given in Fig.9. To facilitate calculations under works conditions, tables were prepared (2 and 3) of required ferromanganese additions for various operating conditions encountered in practice. An example of calculations is given. It is stated in conclusion that the application of the method of calculating the required ferromanganese additions in practice decreased the consumption of the latter by 1 - 1.5 kg/ton of steel and prevented the production of metal outside the composition required.

There are 3 tables, 9 figures and 5 Slavic references.

ASSOCIATION: Magnitogorsk Mining-Metallurgical Institute and MMK. (Magnitogorskiy Gorno-Metallurgicheskiy Institut i MMK).

AVAILABLE: Library of Congress

Card 4/4

SOV/137-58-9-18600

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 62 (USSR)

AUTHOR: Dikshteyn, Ya.I.

TITLE: Means of Increasing the Productivity of Steel-smelting Shops (Puti povysheniya proizvoditel'nosti staleplavil'nykh tsekhov)

PERIODICAL: Tr. Nauchno-tekhn. o-va chernoy metallurgii, 1957, Vol 18, pp 454-459

ABSTRACT: In order to increase productivity, the following measures were undertaken at the MMK (Magnitogorsk Metallurgical Kombinat): a) An increase in the charge of 150-ton furnaces to 165 tons; b) employment of molds with internally heated hot heads; c) modification of the stripper cranes. At the same time efforts were made in the following areas: Development of a technology which would reduce the smelting time and improve the quality of steel; improved fuel supply for the furnaces; provisions for essential equipment; perfection of furnace design; coordination of all correlated sectors and departments. In 1955 hot down time was reduced to 3.2%. The operation of the slag yard where slag is broken up to proper size and the disposal of waste slags was organized more efficiently. In the period of 1944-1955 the

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Means of Increasing the Productivity of Steel-smelting Shops

average weight of smeltings, the smelting time remaining the same, increased by 93 tons, whereas the consumption of conventional fuel was reduced by 57.6 kg/t or by 70%. Since 1943 the weight of a charge was increased to 380 tons. Simultaneously, the load-carrying capacity of ladle cranes was increased from 220 to 270 tons; also increased were the translational speeds of the charge cranes and the rates of lifting of loads. The volume of the charging boxes was increased to 1.24 m^3. In 1950 the electromagnetic cranes employed in the charge yards were modified in order to make them capable of greater speeds and increase their load-carrying capacity from 10 to 15 tons. The problem of reducing the casting time was resolved without resorting to increased speeds by a method of two-channel casting. The efficiency of fuel combustion was also increased. A factor of decisive importance was the changeover to the employment of magnesite-chromite furnace crowns, a step which made it possible to raise the temperature of the flame and reduce the smelting time. Compared with 1944, the over-all increase in the output of the furnaces in 1955 was 80%. The composition of the liquid cast iron was stabilized. Further measures necessary to increase the productivity of the steel-smelting shops are as follows: a) Completion in 1957 of the construction of fuel-oil facilities and availability of natural-gas supply to Magnitogorsk; b) construction of additional mixers

Means of Increasing the Productivity of Steel-smelting Shops

with a resulting increase in productivity of 9-10%; c) increase in the capacity of the charge boxes to 1.75 m^3; d) expansion of the charge yards, which should increase the smelting of steel by 3-4% and will reduce the time of the charging operations; e) construction of compressors and heat-recovery boilers in open-hearth shops; f) increase in the number of casting platforms; g) processing of cast iron with oxygen and desulfurizing agents; h) improving the qualifications of workers and engineering and technician personnel; i) rationalization and fostering of inventive efforts.

I.B.

1.Foundries--Production 2. Industrial production--Development 3. Slags --Preparation 4. Hoists--Design 5. Refractory materials--Applications

KOROLEV, A.I.; BLINOV, S.T.; LUBENETS, I.A.; KOBURNEYEV, I.M.; TURUBINER, A.L.; VASIL'YEV, S.V.; CHERNENKO, M.A.; BELOV, I.V.; TELESOV, S.A.; MAZOV, V.F.; MEDVEDEV, V.A.; MAL'KOV, V.G.; BUL'SKIY, M.T.; TRUBETSKOV, K.M.; SHNEYEROV, Ya.A.; SLADKOSHTEYEV, V.T.; PALANT, V.I.; KUROCHKIN, B.N.; ZHDANOV , A.M.; BELIKOV, K.N.; SABIYEV, M.P.; GARBUZ, G.A.; PODGORETSKIY, A.A.; AL'FEROV, K.S.; NOVOLODSKIY, P.I.; MOROZOV, A.N.; VASIL'YEV, A.N.; MARAKHOVSKIY, I.S.; MALAKH, A.V.; VERKHOVTSEV, E.V.; AGAPOV, V.F.; VECHER, N.A.; PASTUKHOV, A.I.; BORODULIN, A.I.; VAYNSHTEYN, O.Ya.; ZHIGULIN, V.I.; DIKSHTEYN, Ya.I.; KLIMASENKO, I.S.; KOTIN, A.S.; MOLOTKOV, N.A.; SIVERSKIY, M.V.; ZHIDETSKIY, D.P.; MIKHAYLETS, N.S.; SLEPKANEV, P.N.; ZAVODCHIKOV, N.G.; GUDEMCHUK, V.A.; NAZAROV, P.M.; SAVOS'KIN, M.Ye.; NIKOLAYEV, A.S.

Reports (brief annotations). Biul. TSNIICHM no.18/19:36-39 '57. (MIRA 11:4)

1. Magnitogorskiy metallurgicheskiy kombinat (for Korolev, Belikov, Agapov, Dikshteyn). 2. Kuznetskiy metallurgicheskiy kombinat (for Blinov, Vasil'yev, A.N., Borodulin, Klimasenko). 3. Chelyabinskiy metallurgicheskiy zavod (for Lubenets, Vaynshteyn). 4. Zavod im. Dzherzhinskogo (for Koburneyev). 5. Zavod "Zaporozhstal'" (for Turubiner, Mazov, Podgoretskiy, Marakhovskiy, Savos'kin). 6. Makeyevskiy metallurgicheskiy zavod (for Vasil'yev, S.V., Mal'kov, Zhidetskiy, Al'ferov). 7. Stal'proyekt (for Chernenko, Zhdanov, Zavodchikov). 8. VNIIT (for Belov). 9. Stalinskiy metallurgicheskiy zavod (for Telesov, Malakh).

(Continued on next card)

KOROLEV, A.I.---(continued) Card 2.

10. Nizhne-Tagil'skiy metallurgicheskiy kombinat (for Medvedev, Novolodskiy, Vecher). 11. Zavod "Azovstal'" (for Bul'skiy, Slepkanev). 12. TSentral'nyy nauchno-issledovatel'skiy institit chernoy metallurgii (for Trubetskov). 13. Ukrainskiy institut metallov (for Shneyerov, Sladkoshteyev, Kotin). 14. Zavod "Krasnyy Oktyabr'" (for Palant). 15. Vsesoyuznyy nauchno-issledovatel'skiy institut metallurgicheskoy teplotekhniki (for Kurochkin). 16. Zavod im. Voroshilova (for Sabiyev). 17. Chelyabinskiy politekhnicheskiy institut (for Morozov). 18. Giprostal' (for Garbuz). 19. Ural'skiy institut chernykh metallov (for Pastukhov). 20. Zavod im. Petrovskogo (for Zhigulin). 21. Ministerstvo chernoy metallurgii USSR (for Molotkov, Siverskiy). 22. Glavspetsstal' Ministerstva chernoy metallurgii SSSR (for Nikolayev).

(Open-hearth process)

15(2)

AUTHORS: Bron, V. A., ~~Dikshteyn, Ye. I.,~~ Medyakova, M. V., Nazarov, K. S., Rigmant, N. M. SOV/131-58-12-4/10

TITLE: Increase in Stability and Operation Efficiency of the Regenerative Checker Chambers of 400 Ton Martin Furnaces (Povysheniye stoykosti i effektivnosti raboty nasadok regeneratorov 400-T martenovskikh pechey)

PERIODICAL: Ogneupory, 1958, Nr 12, pp 545 - 551 (USSR)

ABSTRACT: The 400 ton Martin furnaces possess small specific volumes of the slag containers and checker chambers (Table 1), which results in an intense impurification by melting dust and a rapid wear of the checker chambers. Chromo-aluminous refractories of the Semilukskiy works were tested (see paper by V. A. Bron, I. V. Savkevich, R. S. Mil'shenko, Ref 1) in order to increase the stability of the checker chambers. Figure 1 presents the temperature changes of chamotte, forsterite and chromo-aluminous bricks when the butterfly valves are tilted over. The temperatures were measured by M. G. Kozhanov, V. G. Beloshapkin under the supervision of A. M. Kulakov (Ref 2). Figures 2,3,4, and 5 present

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the state of the checker bricks after 213 meltings. The bricks are covered with melting dust which sometimes is caked together with them. The chemical composition of the melting dust shows (Table 2) that an enrichment of the dust with alumina is effected at the places of contact with chromo-aluminous bricks, which is connected with an increase in refractoriness, as confirmed by the petrographical investigation (carried out by T. F. Raychenko, Ref 3). Table 3 gives the characteristics of chromo- aluminous bricks after operation in the top-most unit of the checker chambers of the air and gas generators. Figure 6 shows the microstructure of the slag cover of a chromo-aluminous brick after working in the top-most unit of the checker chambers of the air generator. Table 4 presents the operation values of the checker chambers of 400 ton Martin furnaces produced from various refractory bricks, as well as the repairs carried out. The thermal conductivity of refractory bricks before and after working in the regenerative checker is demonstrated in figure 7 for chromo-aluminous, dinas, chamotte and forsterite bricks.

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Chromo-aluminous bricks yielded the best results. The use of these bricks under simultaneous washing of the checker chambers promotes the reduction of the melting duration and fuel consumption (Fig 8). Conclusions: The use of chromo-aluminous bricks with an alumina content of 78-80% and a chromium oxide content of 9-11% in the upper 8-12 units of the checker chambers increases, in connection with their washing, the stability of the checkers and the efficiency of furnace operation. It is regarded as necessary to improve the methods of washing the checkers and test other highly refractory products in the checkers of the 400 ton Martin furnaces. There are 8 figures, 4 tables and 1 Soviet reference.

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SOV/133-59-2-5/26

AUTHORS: Voronov, F.D., Engineer,
Dikshteyn, Ya.I.,
Zuts, K.A., Candidate of Technical Sciences, Docent
Trifonov, A.G.

TITLE: An Experience in Converting a 400 Ton Open Hearth Furnace to Firing with Sulphurous Fuel Oil (Opyt perevoda 400-t martenovskoy pechi na sernistyy mazut)

PERIODICAL: Stal', 1959, Nr 2, pp 112-116 (USSR)

ABSTRACT: The Magnitogorsk Metallurgical Combine was designed with a balanced fuel economy i.e. coal was delivered only for coking and the coke oven and blast furnace gases should be sufficient for all other fuel requirements. However, an improvement in the operation of blast furnaces lead to a considerable decrease in the coke consumption and thus to a decrease in the output of coke oven gas. Moreover, the calorific value of blast furnace gas decreased from 944 K cal/m^3 in 1952 to 866 K cal/m^3 in 1957 and its consumption for heating blast increased as much higher blast temperatures are used. In addition some new gas

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consumers were introduced (sheet rolling mill etc.) so that a wider use of fuel oil became necessary. A description of the transfer of a 400 ton open hearth furnace from firing with a mixture of coke oven and blast furnace gas to oil firing and operational results obtained is given. The design of the furnace remained the same only the design of parts was modified. Oil was supplied through two injectors placed outside of the casing. The two oil flames from both sides of the gas part unit into one flame at a distance of 1 m from the injectors (Fig.2). Air is being blown by a fan via former gas conduit. The following operational results were obtained: consumption of conventional fuel 105 kg/t of steel instead of previous 130 kg/t; mean duration of heat 12 hrs 15 min instead of 13 hours; the durability of regenerators to the first hot repairs 274 heats instead of 170; the volume of the regenerators changed during small cold repairs 260 m^3 instead of 350 m^3. However, due to high sulphur content of oil (about 2%) a noticeable increase of the transfer

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of sulphur to the metal bosh was observed. For this reason smelting of steels in the furnace was limited to grades with the permissable sulphur content of 0.045%. There are 9 figures.

ASSOCIATION: Magnitogorskiy Metallurgicheskiy Kombinat i Magnitogorskiy Gorno-metallurgicheskiy Institut
(Metallurgical Combine and Magnitogorsk Institute of Mining Metallurgy)

S/133/60/000/012/003/015
A054/A027

AUTHORS: Bas'yas, I.P., Vyaznikova, T.A., Koksharov, V.D., Dikshteyn, Ye. I., Selivanov, I.A., Makarychev, A.R., and Nazarov, K.S.

TITLE: Optimum Working Conditions for Basic Roofs of Open-Hearth Furnaces

PERIODICAL: Stal', 1960, No. 12, pp. 1086-1092

TEXT: In order to investigate the factors influencing the useful life of magnesite-chromite bricks used for open-hearth furnace roofs tests were carried out in the Magnitogorsk Metallurgical Combine (1957-1959) with furnaces fired a) with masut only, ("masut type furnace"); b) with blast-furnace coke and an addition of 30 kg/hour of tar ("gas-type" furnace); c) with blast-furnace coke and an addition of 500-700 kg/hour of coal tar, ("mixed-type" furnace). The tests served to determine the temperature of the magnesite-chromite bricks at various distances from the working surface of the roof, the composition of the atmosphere under the roof, the quantity and composition of dust and the rate of the decomposition in bricks. For these purposes the following devices were employed: ФЭП (FEP) type photoelectric pyrometer, platinum-rhodium and platinum thermocouples, mounted in a 75 x 75 x

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460 mm magnesite-chromite rod, the hot junctions of the thermocouples being at 0, 10, 15 and 30 mm distance from the working surface. Where the hot junction was placed immediately on the surface, it was protected by a silicium-rich cap, with a wall 0.8 mm thick; a single-point potentiometer with a disc scale rotating at 0.5 rph; for gas analysis ГХП (GKhP-3) type and for random tests ВТИ-2 (VTI-2) type analyzers were used. The melting dust under the roof was collected by a water cooled detachable brass tube connected in series with water filters, gasometers and ejectors. For introducing the apparatus in the under-roof area 7 openings, (80 x 80 mm) were made in the roof. In the tests the relationship between the character of temperature change of the working roof surface and the duration of break in firing, the opening of the charging doors, the time during which cold materials are in the furnace, the duration of various processes and repairs were investigated for all three types of furnaces. It was found that the useful life of the roof in the first place depended on the kind of fuel used, on the place where fuel was fed in the furnace and on thermal loads. The shortest useful life was observed for masut-fired furnaces, working under unfavorable atmospheric conditions; CO was frequently, carbohydrates were occasionally found in the roof zone. Even when

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part of the gas fuel was replaced by a liquid (max. 500-700 kg/hour) the useful life of the roof was shortened, mainly when charging masut or tar through tuyères mounted at the external sides of the fuel tanks. Hydrocarbons are harmful because the ceramic surface of the bricks acts as a catalyst and promotes their decomposition during heating and thereby also the activation of oxidation-reduction processes which deteriorate the iron-rich zones of the refractory bricks. When firing with partly liquid or all-liquid fuel the temperature conditions are also adversely affected because the velocity of temperature changes on the working surface increases during reversing (up to 300°C/min), the temperature drop can attain 200°C and more in this interval; the cooling time of the roof increases during charging while the temperature can decrease to 1,300°C and lower. When cooling below 1,500-1,450°C, the refractory bricks deteriorate considerably under the effect of temperature change, because the working zones of refractory material pass from a semi-plastic heat-resistant condition into a brittle, non-heat-resistant state. As, however, in some cases cooling even below 1,000°C (for instance, during repair) does not increase deterioration of the bricks, it can be assumed that actually not cooling itself, but its accompanying phenomena, such as speed

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and frequency of heat changes during the non-heat-resistant period of the working zones in refractory bricks are the causes of their decomposition. The best of operation conditions of the roof is, when it is not cooled below 1,500°C. However, with the present methods of charging high-capacity furnaces this can be obtained only by extending the charging time or by intensifying the combustion of fuel. When having to cool the roof under 1,450-1,500°C during charging, the number of reversals should preferably be reduced by intensifying combustion as much as possible, and by increasing the intervals between reversings. As the changes in the composition of atmosphere under the roof, recurring for 7-9 minutes, also add to the decomposition of the refractory bricks, care should be taken to prevent any reducing medium from entering this area, not even for a short time. Refractory bricks deteriorate more quickly in the first phase of the furnace campaign than in the subsequent phase. This shows that decomposition takes place quickly when there are refractory bricks with a high content of iron oxides in the working area. There are 6 figures, 8 tables and 3 Soviet references.

ASSOCIATION: Vostochnyy institut ogneuporov (Eastern Institute of Refractory Material), Magnitogorskiy metallurgicheskiy kombinat (Magnitogorsk Metallurgical Combine)

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MOROZOV, Aleksandr Nikolayevich, prof., doktor tekhn. nauk; YEFANOV, N.I., retsenzent; BELIKOV, K.N., inzh.-martenovets, red.; DIKSHTEYN, Ye.I., inzh.-martenovets, red.; KRYUKHOVA, M.L., red. izd-va; TURKINA, Ye.D., tekhn. red.

[Modern open-hearth process] Sovremennyi martenovskii protsess. Sverdlovsk, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, Sverdlovskoe otd-nie, 1961. 600 p. (MIRA 14:5)

(Open-hearth process)

S/133/61/000/003/002/014
A054/A033

AUTHORS: Dikshteyn, Ye. I.; Goncharevskiy, Ya. A.; Zuts, K.A.; Antipin, V. G.; Koshanov, M. G.; Zarzhitskiy, Yu. A.; Kulakov, A. M.;

TITLE: Mastering the operation of a 500-ton open-hearth furnace fired by coke-oven gas and mazut

PERIODICAL: Stal', no. 3, 1961, 210 - 214

TEXT: The 500-ton open-hearth furnace designed by the "Stal'proyekt" operates according to the scrap-ore process and is fired by cold coke-gas (4100 cal/m^3) and mazut (9600 cal/kg). The principal data of the furnace are: charge 500 - 550 tons, hearth area 105 sq m, depth of the bath 1.2 m, height (over the altar level) of the crown 3.15 m, of the air partition 1.35 (1.2) m, of the burner axis 1.30 (1.6) m, useful volume of slag chamber 142 m^3, stack height 90 m. The results obtained by the furnace design and firing system could be improved by incorporating several modifications. For instance, there are two gas-mazut burners, one on either side of the furnace. This is a simple structural solution but did not prove very effi-

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cient. By applying two or three burners on either side of the furnace this situation could be improved. The blast produced is not enough to ensure the heat conditions required. The vacuum produced by the stack and wasteheat boiler (60 and 75 mm water column, respectively)is inadequate to efficiently evacuate the gaseous combustion products from the operating area of the furnace. The efficiency of the blast system is unfavourably affected by losses in the cold-air exhaustion system through the slag chambers, which require a better insulation. The heat transfer capacity of the torch was also unsatisfactory. Carbon monoxide in the combustion products in the vertical channel already disappeared when there was 3 - 3.5 % oxygen present, indicating an inadequate mixing of fuel and air. In order to improve the mixing and radiation capacity of the torch, compressed air was introduced separately through a special tube. This, however, did not solve the problem and had to be put down to the wrong type of feed-opening. Tests were also carried out to raise the heating capacity of the torch by improving the operation of the pulverizer, by means of increasing its capacity, i.e., the consumption of high-pressure steam in the pulverizer. The radiation capacity of the torch for cold coke-gas and mazut depends largely on the ratio at which these two fuels are consumed. For the furnace in question the optimum

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condition for the torch was obtained when 1700 - 1800 kg/h mazut was consumed and when the thermal load of the furnace amounted to 40 mill. cal/h, (Fig. 6). Tests carried out to improve the furnace operation by increasing the heat load to 50 mill.cal/h only resulted in greater wear, without improving the operational conditions. Actual improvement was obtained by decreasing heat losses through the stoke holes, amounting to 2 mill.cal/h, by a suitable insulation and by feeding 1800 - 2000 Hm^3/h compressed air into the torch, thus increasing its temperature to 1850°C and distributing it more uniformly along the torch. By increasing the heating capacity of the torch, the time required for the optimum heating of the charge and for burning out carbon was reduced. By intensifying the thermal conditions of the furnace, desulfurization became more intensive and it was possible to smelt 08 kp (08kp) grade steel in the furnace. Although the reconstruction of the furnace and the application of modifications improved and stabilized the operation of the 500-ton mixed fuel furnace, the burner system will still have to be modified and a suitable method to be applied for preparing the gas, in order to change over from mixed fuel to gas-firing only. There are 9 figures and 2 tables.

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Figure 1: Gas-mazut burner of the 500-ton open-hearth furnace.

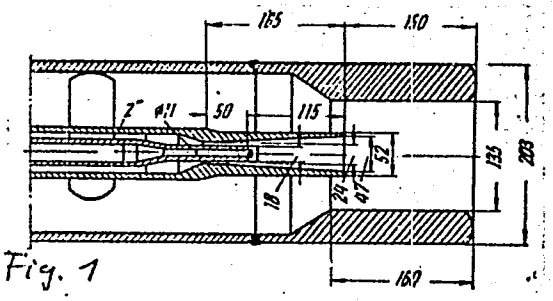
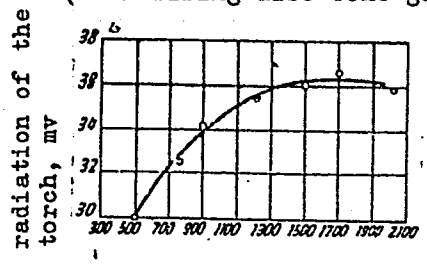


Fig. 1

Figure 6: Dependence of the radiation of the torch on the amount of mazut consumed (when firing also coke gas)



Mazut consumption, kg/h

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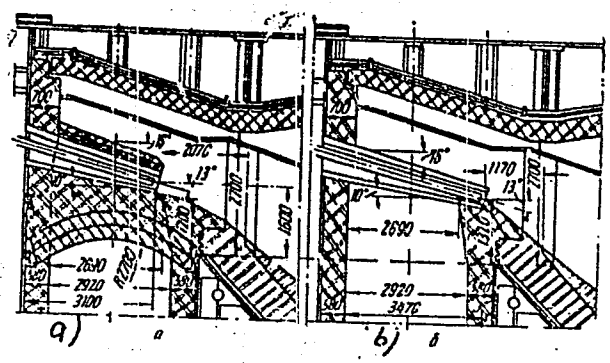
Figure 8: Change of the mazut burner structure
a) after reconstruction,
b) before reconstruction.



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S/193/61/000/006/001/007
A004/A104

AUTHORS: Dikshteyn, Ye. I.; Antipin, V. S., and Kozhanov, M. G.

TITLE: The operation of open-hearth furnaces with single-channel ports

PERIODICAL: Byulleten' tekhniko-ekonomicheskoy informatsii, no. 6, 1961, 3-6

TEXT: One of the plants of the Russian Federation has introduced 500-ton open-hearth furnaces with single-channel ports fuelled by a mixture of cold coke gas and mazout. The furnaces are operated on the scrap-ore process utilizing 65% of liquid pig iron. They are lined with basic refractories, slag pocket and regenerator roofs are of the massive suspension type. The coke oven gas with a calorific value of 4,100 kcal/nm^3 is supplied through a 400 mm diameter gas pipeline at a pressure of 3,000 mm water column to the burners with a reduced pressure of 1,000-1,500 mm water column. The mazout with a calorific value of 9,600 kcal/hour, containing 0.5-1.5% sulfur, is supplied to the furnace at a pressure of 6-7 atm. The mazout is atomized at a pressure of 10 atm and a temperature of 200°C. Reversible dampers of the Shvir system 2,200 mm in diameter are used which do not fully meat the requirements of modern big-volume open-hearth furnaces, but, according to the authors, hitherto no more expedient type of damper has been

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developed. Fig. 1 shows the structural changes which have been carried out to improve the furnace operation. Legend to Fig. 1: 1) prior to repair; 2) after repair; 3) gas-mazout burner installation. The heat losses through the breast were reduced nearly by a factor of 4 and amounted to $0.5 \cdot 10^6$ kcal/hour. The compressor air pressure was raised from 2 to 5 atm. As a result of these alterations the absolute flame temperature increased by 50°C and more, while the maximum heating zone moved nearer to the flame root. Tests showed that it is necessary to supply 1,800 - 2,000 m^3 air per hour. The modernization of the port made it possible to increase the furnace efficiency by 15.6% and cut down the heat consumption for the steel production by 19.5%. A great influence on the efficacy of the gas-mazout flame of open-hearth furnaces with single-channel ports is exerted by the height of the air damstones and by the angle of inclination of the burners. Various angles in the range of 8-13° relative to the bath level were tested and it was found that the maximum heat transfer was obtained with great angles of inclination of the burners. On one of the furnaces the burner design was altered in such a way that the mazout was not supplied through a sprayer located in the center of the gas burner but through two sprayers cut in the body of the breast, which resulted in a higher flame radiation. The table shows the distribution of thermal loads during the different heating periods prior to the

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alterations of the port design and after.

Table:
1) operation; 2) prior to port alteration; 3) after port alteration; 4) filling; 5) charging; 6) heating up; 7) pig iron pouring and 1st hour of melting; 8) melting; 9) end of melting; 10) finishing.

1) Операции	До изменения 2) головок	После изменения 3) головок
4) Заправка	$32 \cdot 10^6$	—
5) Завалка	$40,0 \cdot 10^6$	$48 \cdot 10^6$
6) Прогрев	$40,0 \cdot 10^6$	$44 \cdot 10^6$
7) Слив чугуна и 1-й час плавления	$38,0 \cdot 10^6$	$40 \cdot 10^6$
8) Плавление	$34,0 \cdot 10^6$	$36 \cdot 10^6$
9) Конец плавления	$36,0 \cdot 10^6$	—
10) Доводка	$38,0 \cdot 10^6$	$40 \cdot 10^6$

The maximum flame radiation is attained at a heat consumption of mazout of 42-45% relative to the total thermal load. After the port design had been altered the heating capacity of the furnace increased, which made it possible to cut down the heating up period of the charge prior to the pig iron pouring from 2 to 1.5 hours. Increasing the thermal loads, the optimum values for the coefficients of

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The operation of open-hearth furnaces ...

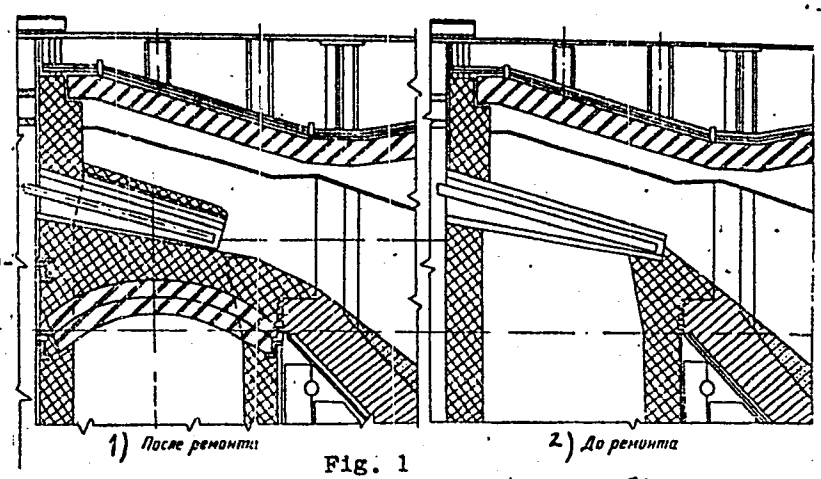

Fig. 1

Рис. 1. Установка газомазутной горелки 3)

excess air in the supply ports during the melting process were determined as follows: filling - 1.20; heating up - 1.20; pig iron pouring - 1.50; melting - 1.40; finishing - 1.10-1.05. The regenerator checkers of open-hearth furnaces operating on cold coke gas have to be systematically cleaned and the dust removed from the subchecker space. With rapid charging, i. e. in less than 2 hours, it is expedient to increase the thermal load during this period up to $48 \cdot 10^6$ kcal/hour. There are 2 figures and 1 table.

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VECHER, N.A., inzh.; GERMAIDZE, G. Ye., inzh.; PANFILOV, M.I., dotsent; KHIL'KO, M.M., inzh.; MERSHCHIY, N.P., inzh.; ALFEROV, K.S.., inzh.; ANTONOV, S.P.; DIKSHTEYN, Ya.I.; YAGNYUK, M.I.; BELIKOV, K.N.; GONCHAREVSKIY, Ya.A.; TRIFONOV, A.G.; SEDACH, G.A.

"Open-hearth plants with large-capacity furnaces" by D.A. Smoliarenko, N.I. Efanova. Reviewed by N.A. Vecher and others. Stal' 21 no.2:125-126 F '61. (MIRA 14:3)

1. Sverdlovskiy sovet narodnogo khozyaystva (for Vecher, Germaidze, Panfilov).

(Open-hearth furnace—Design and construction)
(Smoliarenko, D.A.) (Efanova, N.I.)

DIKSHTEYN, Ye.I.; GONCHAREVSKIY, Ya.A.; ZUTS, K.A.; ANTIPIN, V.G.; KOZHANOV, M.G.; ZARZHITSKIY, Yu.A.; KULAKOV, A.M.

Mastering the operation of 500-ton open-hearth furnaces on coke gas and fuel oil [with summary in English]. Stal'21 no.3:210-214 Mr '61. (MIRA 14:6)
(Open-hearth furnaces--Combustion)

VARSHAVSKIY, A.P., inzh.; DIKSHTEYN, Ye.I.

Using various sinters in large-capacity open-hearth furnaces.
Stal' 22 no.1:20-23 Ja '62. (MIRA 14:12)

1. Magnitogorskiy metallurgicheskiy kombinat.
(Sintering) (Open-hearth process)

AGAPOV, V.F.; BEZDENEZHNYKH, A.A.; PERCHATKIN, P.N.; DIKSHTEYN, Ye.I.

Fluxed sinter of sulfurous ores used in open hearth smelting.
Stal' 22 no.8:697-700 Ag '62. (MIRA 15:7)

1. Magnitogorskiy gornometallurgicheskiy institut i Magnitogorskiy metallurgicheskiy kombinat.
(Sintering)
(Open hearth furnaces--Equipment and supplies)

VORONOV, F.D.; TRIFONOV, A.G.; KHUSID, S.Ye.; LIKSHTEYN, Ye.L.; VAL'PITER, E.V. SNEGIREV, Yu.B.; ANTIPIN, V.G.; Prinimali uchastiye: SMIRNOV, L.A.; KAZAKOV, A.I.; YELIZAROV, A.G.; KULAKOV, A.M.; KOZHANOV, M.G.; ZARZHITSKIY, Yu.A.; ARTAMONOV, M.P.; GOL'DENBERG, I.B.; ROMANOV, V.M.; NOVIKOV, S.M.; MAYEVSKIY, A.B.; DMITRIYEV, I.; MANZHULA, M.; BEREZOVOY, I.A.; ZUTS, K.A.; BADIN, S.N.; TATARINTSEV, G.; MITROFANOV, N.G.; GAVRILOVA, K.M.; IVANOV, N.I.

Operating a 400-ton open-hearth furnace on casing-head gas. Stal' 20 no. 7:594-598 Jl '60. (MIRA 14:5)
(Open-hearth furnaces--Equipment and supplies)

VORNOV, F.D.; BIGEYEV, A.M.; DIKSHTEYN, Ye.I.; TRIFONOV, A.G.; KAZAKOV, A.I.; KOROLEV, A.I.; BORODIN, G.L.; ANTIPIN, V.G.; KULAKOV, A.M.; KOZHANOV, M.G.; GAZHUR, V.F.

Investigating the operation of 400-ton open-hearth furnaces following redesign. Stal' 22 no.10:904-907 O'62. (MIRA 15:10)

1. Magnitogorskiy metallurgicheskiy kombinat i Magnitogorskiy gorno-metallurgicheskiy institut.
(Open-hearth furnaces)

DIKSHTEYN, Ye.I.; DEYNEKO, D.I.; ANTIPIN, V.G.; MOROZOV, A.N., doktor tekhn. nauk, prof., nauch. red.; SVET, Ye.B., red.

[Steelmaking at the Magnitogorsk Metallurgical Combine] Staleplavil'noe proizvodstvo na MMK. Cheliabinsk, Cheliabinskoe knizhnoe izd-vo, 1963. 43 p. (MIRA 17:6)

VORONOV, F.D., prof.; D'YAKONOV, A.I., kand.tekhn.nauk; DIKSHTEYN, Ye.I., inzh.; TRIFONOV, A.G., inzh.; LORMAN, V.V., inzh.; KAZAKOV, A.I., inzh.; KOVALIK, I.S., tekhnik.

Technological characteristics of Magnitogorsk Metallurgical Combine open-hearth furnace operations using compressed air in the fuel spray. Stal' 23 no.12:1088-1091 D '63. (MIRA 17:2)

1. Magnitogorskiy metallurgicheskiy kombinat i Magnitogorskiy gorno-metallurgicheskiy institut.

FREYDENBERG, A.S.; DIKSHTEYN, Ye.I.; TRIFONOV, A.G.; ARTAMONOV, M.P.; TVOROGOV, A.R.; SHAKHLIN, V.I.; TARASOV, A.F.

Repair of tapping holes on open-hearth furnaces. Metallurg 9 no.7:20-22 Jl '64. (MIRA 17:8)

1. Magnitogorskiy metallurgicheskiy kombinat.

DIKSHTEYN, Ye.I.; MAGIDSON, M.A.; SHATUKHOV, A.I.; GAZHUR, V.F.

Improving the luminance and organizing the natural gas fuel spray. Stal' 24 no.10:890-892 O '64. (MIRA 17:12)

1. Magnitogorskiy metallurgicheskiy kombinat i Chelyabinskiy nauchno-issledovatel'skiy institut metallurgii.

IGNATOVA, T.S.; FLYAGIN, V.G.; POPOV, A.D.; CHUKREYEVA, Ye.I.; DIKSHTEYN, Ye.I.; NAZAROV, K.S.; MAKARYCHEV, A.R.

Manufacture and testing of highly resistant ladle firebrick. Ogneupory 29 no.11:489-495 '64. (MIRA 18:1)

1. Vostochnyy institut ogneuporov (for Ignatova, Flyagin, Popov, Chukreyeva). 2. Magnitogorskiy metallurgicheskiy kombinat (for Dikshteyn, Nazarov, Makarychev).

DIKTANAS, J.

Thyroid function and coronary insufficiency. Sveik. apsaug. 9 no.2:6-9 F '64

1. Respublikine Panevezio ligonine.

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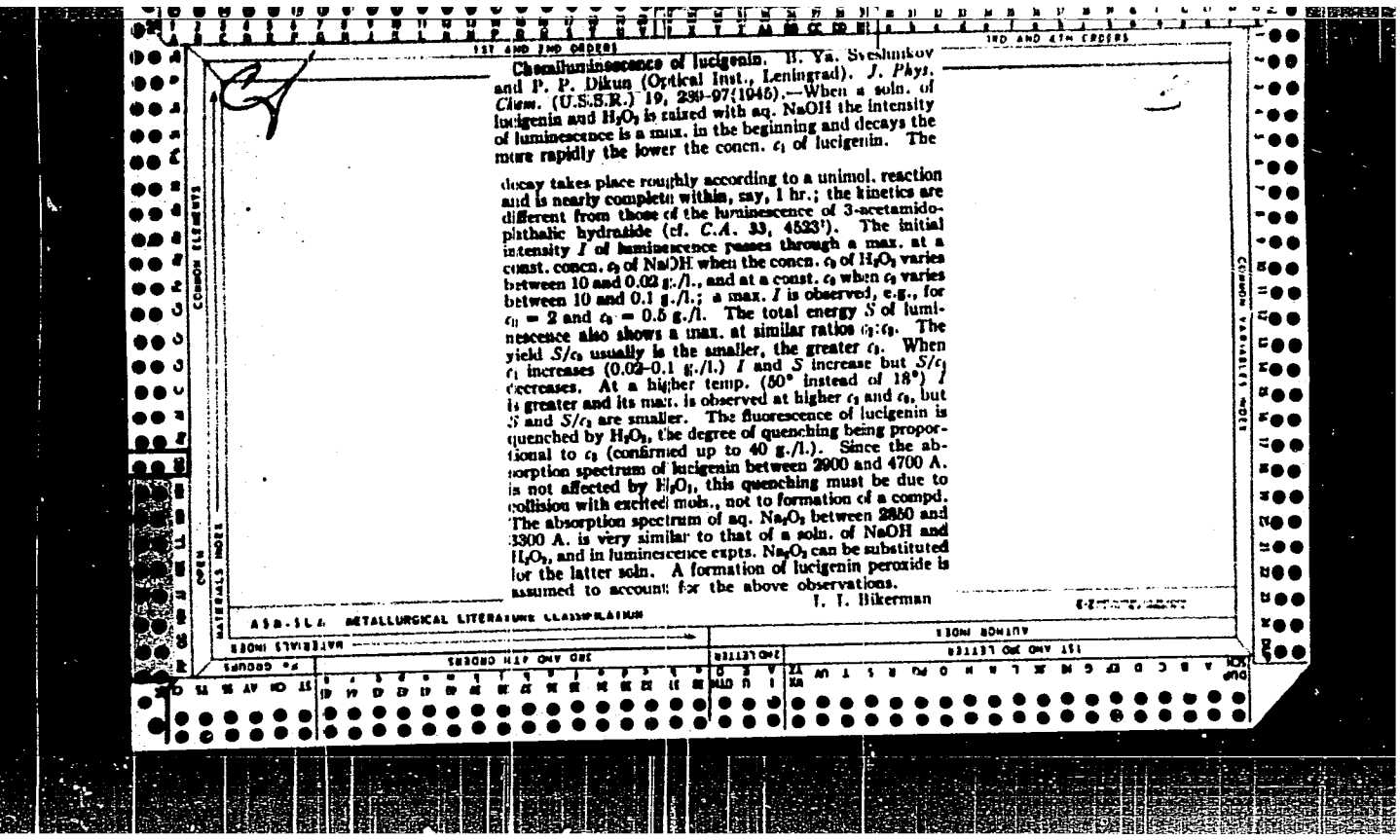
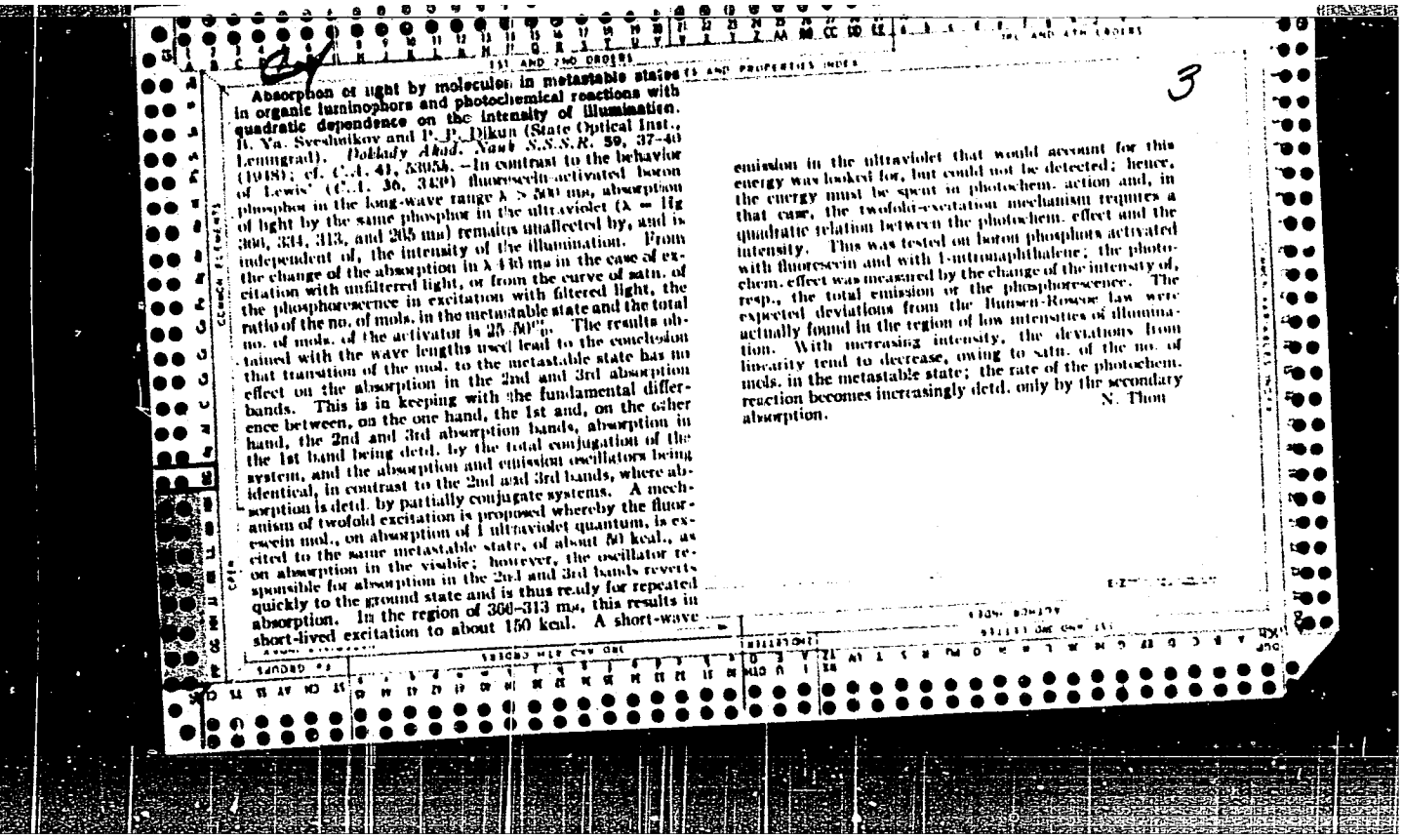
Biol abs.

Chemiluminescence of luciferin. B. J. [illegible] and P. P. Dikun (Acta Physicochim. U.R.S.S., 1942, 17, 173-184). - The kinetics of chemiluminescence of luciferin (I) in aq. H_2O_2-NaOH solution were studied at 18° and 50°. The behaviour is similar to that observed with 3-acetamidophthalhydrazide (II) (A., 1935, I, 600), the main difference being that the curve connecting intensity of luminescence with time for (I) shows no max. This is in part contradictory to Drew's hypothesis (A., 1939, I, 125), but it appears that the first stage of the luminescence process is the same for (I) and (II), viz., the formation of a peroxide. J.F.H.



Chemiluminescence of lucigenin. B. Ya. Sveshnikov and P. P. Dikun (Optical Inst., Leningrad). *J. Phys. Chem.* (U.S.S.R.) 19, 289-97(1945).—When a soln. of lucigenin and H_2O_2 is raised with aq. NaOH the intensity of luminescence is a max. in the beginning and decays the more rapidly the lower the concn. c_1 of lucigenin. The decay takes place roughly according to a unimol. reaction and is nearly complete within, say, 1 hr.; the kinetics are different from those of the luminescence of 3-acetamidophthalic hydrazide (cf. *C.A.* 33, 4523[3]). The initial intensity I of luminescence passes through a max. at a const. concn. c_2 of NaOH when the concn. c_3 of H_2O_2 varies between 10 and 0.02 g./l., and at a const. c_2 when c_3 varies between 10 and 0.1 g./l.; a max. I is observed, e.g., for $c_1 = 2$ and $c_3 = 0.5$ g./l. The total energy S of luminescence also shows a max. at similar ratios $c_2:c_3$. The yield S/c_1 usually is the smaller, the greater c_1. When c_1 increases (0.02–0.1 g./l.) I and S increase but S/c_1 decreases. At a higher temp. (50° instead of 18°) I is greater and its max. is observed at higher c_2 and c_3, but S and S/c_1 are smaller. The fluorescence of lucigenin is quenched by H_2O_2, the degree of quenching being proportional to c_3 (confirmed up to 40 g./l.). Since the absorption spectrum of lucigenin between 2900 and 4700 A. is not affected by H_2O_2, this quenching must be due to collision with excited mols., not to formation of a compd. The absorption spectrum of aq. Na_2O_2 between 2850 and 3300 A. is very similar to that of a soln. of NaOH and H_2O_2, and in luminescence expts. Na_2O_2 can be substituted for the latter soln. A formation of lucigenin peroxide is assumed to account for the above observations.

I. I. Bikerman



Absorption of light by molecules in metastable states in organic luminophors and photochemical reactions with quadratic dependence on the intensity of illumination. B. Ya. Sveshnikov and P. P. Dikun (State Optical Inst., Leningrad). *Doklady Akad. Nauk S.S.S.R.* 59, 37–40 (1948); cf. C.A. 41, 5305h.—In contrast to the behavior of Lewis' (C.A. 36, 3439) fluorescein-activated boron phosphor in the long-wave range $\lambda > 500$ mμ, absorption of light by the same phosphor in the ultraviolet (λ = 334, 313, and 265 mμ) remains unaffected by, and is independent of, the intensity of the illumination. From the change of the absorption in λ 436 mμ in the case of excitation with unfiltered light, or from the curve of satn. of the phosphorescence in excitation with filtered light, the ratio of the no. of mols. in the metastable state and the total no. of mols. of the activator is 25–50%. The results obtained with the wave lengths used lead to the conclusion that transition of the mol. to the metastable state has no effect on the absorption in the 2nd and 3rd absorption bands. This is in keeping with the fundamental difference between, on the one hand, the 1st and, on the other hand, the 2nd and 3rd absorption bands, absorption in the 1st band being detd. by the total conjugation of the system, and the absorption and emission oscillators being identical, in contrast to the 2nd and 3rd bands, where absorption is detd. by partially conjugate systems. A mechanism of twofold excitation is proposed whereby the fluorescein mol., on absorption of 1 ultraviolet quantum, is excited to the same metastable state, of about 50 kcal., as on absorption in the visible; however, the oscillator responsible for absorption in the 2nd and 3rd bands reverts quickly to the ground state and is thus ready for repeated absorption. In the region of 366–313 mμ, this results in short-lived excitation to about 150 kcal. A short-wave emission in the ultraviolet that would account for this energy was looked for, but could not be detected; hence, the energy must be spent in photochem. action and, in that case, the twofold-excitation mechanism requires a quadratic relation between the photochem. effect and the intensity. This was tested on boron phosphors activated with fluorescein and with 1-nitronaphthalene; the photochem. effect was measured by the change of the intensity of, resp., the total emission or the phosphorescence. The expected deviations from the Bunsen-Roscoe law were actually found in the region of low intensities of illumination. With increasing intensity, the deviations from linearity tend to decrease, owing to satn. of the no. of mols. in the metastable state; the rate of the photochem. reaction becomes increasingly detd. only by the secondary absorption.

N. Thon

USSR/Physics May 1948
Phosphorescence
Viscosity

PA 22706

"On the Relation of the Duration of Phosphorescence of Organic Luminophores to the Viscosity of the Solvent," B. Ya. Sveshnikov and P. P. Dikun, State Optical Inst, 4 pp

"Dok Ak Nauk SSSR," Vol LX, No 4 pp 571-4.

Reports subject experiments. Organic luminophores used were ~~rhoduline~~ orange for low viscosities (0.2 poise) and hard candy for high viscosities (6 poises). Viscosity was altered by varying solvents, e.g., glycerine, ethylene glycol, etc. Exciting light came from high pressure mercury lamp. Illumination was measured with Fabri-Helhof photometer. Results are shown graphically and discussed.

[redacted] 77T96

DIKUN, P. P.

35810. Spektry fosforestsentsii benzola i ego metil'nykh zameshchennykh. Zhurnal eksperim i teoret. fiziki, 1949, VYP. 11, S. 1000-20--Bibliogr: 21 Nazv. SVESHNIKOV, B. YA.

SO: Letopis' Zhurnal'nykh Statey, Vol. 49, Moskva, 1949

C.A

J

Phosphorescence spectra of benzene and its methyl derivatives. B. P. Dikun and B. Ya. Sveshnikov (State Optical Inst., Leningrad). *Zhur. Eksptl. Teoret. Fiz.* 19, 1000–20(1949).—In frozen alc. soln. at the temp. of liquid air, the short-wave part of the phosphorescence spectrum of C_6H_6 shows a distinct vibrational structure. The observed frequencies are 20515 (v.w.), 28800 (v.w.), 28342 (st.), 27922(v.st.), 27330(st.), 26920(v.st.), 26114(m.), 25922(v.st.), 25540(m.), 25312(m.), 25144(st.), 24920 (v.st.), 24710(st.), 24515(m.), 24350(v.w.), 24107(st.), 23931(w.), 23730(m.), 23535(w.), 23100 cm.$^{-1}$(st.). The vibration frequencies are 1595, 1187, 1000, and 655 cm.$^{-1}$, corresponding to the Raman and infrared frequencies 1590, 1187, 992, and 685, with the respective designations 8, 9, 1, and 4, of the symmetry E_2', E_2'', A_{1g}, and B_{2g}, resp. With the exception of the 2nd line, all lines fit the formula $\nu = \nu_0 - n_1\nu_1 - n_2\nu_2 - n_3\nu_3$, where n_1 can be $\neq 0$ only if n_2 or n_3 or both $\neq 0$. All observed lines belong to the series $\nu = \nu_0 - n_1\nu_1 - n_2\nu_2$ and $\nu = \nu_0 - n_1\nu_1 - n_3\nu_3$. In the phosphorescence spectrum of 1,3,5-$C_6H_3Me_3$, the observed frequencies are 28140(w.), 27420(w.), 26907 (m.), 26550(st.), 25858(m.), 25452(w.), 25075(v.w.), 24510(st.), 24183(v.w.), 23940(st.), 23530(v.st.), 22930 (st.), 22410(st.), 21880(v.st.), 21340(st.), 21005(v.w.), 20772(st.), 20375(st.); the vibration frequencies are 1610, 1100, 3050, 720, and 575 cm.$^{-1}$, corresponding to the Raman and infrared 1610, 1100, 3047, 690, and 575, designations 8, 9, 7, 4, and 12, symmetry E', E', E'', A_2'', and A_1', resp. For p-$C_6H_4Me_2$, observed frequencies 28108(m.), 27840(v.w.), 27375(m.), 26865(m.), 26581 (v. st.), 26102(w.), 25701(st.), 25380(m.), 24070(st.), 24350(w.), 24180(st.), 23781(m.), 23414(w.), 23070(w.), 22583(v.w.); the vibration frequencies, 1578, 1182, 793, 322, and 1016 cm.$^{-1}$, are identical with the Raman-infrared 1575, 1182, 820, 313, and 1016, designations 8b, 9a, 1, 9b, and 8a, symmetry B_{1g}, A_g, A_g, B_{1g}, and A_u, resp. For o-$C_6H_4Me_2$, 28764(m.), 28048(w.), 27644(m.), 27263(v.st.), 26878(v.w.), 26437(st.), 26080(st.), 25640(v.st.), 25374(st.), 24888(st.), 24528(st.); vibrations 1584, 1117, and 733 cm.$^{-1}$, designations 8a, 9a, and 1, resp., symmetry A_1. For m-$C_6H_4Me_2$, 28120 (m.), 27000(w.), 27353(m.), 26752(v.st.), 26430(v.w.), 26058(st.), 25772(st.), 25180(st.), 25004(w.), 24213(m.); vibrations 1592, 945, and 724 cm.$^{-1}$, designations 8a, 7b, and 12, resp., symmetry A_1, B_1, and A_2. For $PhMe$, 28800(m.), 28170(w.), 27900(m.), 27750(st.), 27344 (v.st.), 26980 (v.w.), 26563(w.), 26310(st.), 26163(st.), 25724(m.), 24627(m.), 24200(m.); vibrations 1589, 1155, 1002, and 730 cm.$^{-1}$, identified with Raman-infrared 1580, 1155, 1002, and 695 cm.$^{-1}$, designations 8b, 9b, 1, and 4, resp., symmetry B_1, B_1, A_1, and B_1. In the

over

60, light bluish purple (1.85, light purple); 1,2,3-C_6H_3-(OH)$_3$ 1.88, 0.53, 25, greenish blue (0.81, deep purple); p-$C_6H_4Me_2$ 6.2, 0.16, 220, purple; o-$C_6H_4Me_2$ 5.2, 0.19, 140, purple; p-$MeC_6H_4CHMe_2$ 5, 6.2, 250, purple; PhMe 4.8, 0.21, 120, purple; PhEt 4.6, 0.21, 150, purple; C_6H_6 3.6, 0.28, 42, light blue-violet (3.1, light sky blue); $BzOH$ 2.2, 0.46, 870, purple (2.2, light purple); o-$HOC_6H_4CO_2H$ 1.8, 0.57, 45, dark blue-violet (1.2, sky-bluish green); 1,2,3-$(HO)_2C_6H_2CO_2H$-5, 1.6, 0.64, 420, sky blue (1.5, sky-bluish green); o-$C_6H_4(CO_2H)_2$, 1 and 2 (1st and 2nd half of the decay), 0.94 and 0.48 (1st and 2nd half of the decay), 300, light blue (0.99, yellowish green). Introduction of one OH group decreases τ; a 2nd and a 3rd OH group increase τ in the ortho, para, and symmetrical positions, but decrease it in the meta and vicinal positions. Introduction of one Me group into the ring increases τ, and the same applies to a 2nd Me in ortho or para position; however, Me groups in the side chain decrease τ. Introduction of CO_2H groups decreases τ in all cases. OH- and CO_2H-substituted derivs. in frozen alc. soln. have a shorter, Me-substituted derivs. a longer τ than C_6H_6 under the same conditions. Comparison with the results of Pyatnitskiĭ (*Doklady Akad. Nauk S.S.S.R.* 57, 771(1947); *C.A.* 43, 4957*h*) shows that soln. in alc. generally shifts the color of phosphorescence to shorter wave lengths (with the exception of pyrogallol), and lengthens τ (hydroquinone excepted). N. Thon

USSR/Physics Apr 49
Phosphorescence
Benzene

"A Study of the Phosphorescence Spectrum of Benzene," P. P. Dikun, B. Ya Sveshnikov, State Opt Inst, 4 pp

"Dok Ak Nauk SSSR" Vol LXV, No 5, pp 637-40.

Attempts to determine if the selection rule suggested by symmetry, can be applied in the study of vibratory structure of the spectrum in solid solutions and, if it can be applied, whether any indications of symmetry in phosphorescent levels can be obtained. Concludes that: (1) Selection rule by symmetry, is applicable to solid solutions. (2) Phosphorescence of

FA 39/49T105

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USSR/Physics (Contd) Apr 49

benzene corresponds to electron migration which simultaneously has two prohibitions: intercombination and symmetry. Submitted by Acad S. I. Vavilov, 14 Feb 49.

[redacted] 39/49T105

DIKUN, P. P.

PA 156T84

USSR/Physics - Phosphorescence
Spectrum Analysis
21 Apr 49

"Investigating Mesitylene's Phosphorescence Spectrum," P. P. Dikun, B. Ya. Sveshnikov, State Opt Inst, 4 pp

"Dok Ak Nauk SSSR" Vol LXV, No 6, pp 827-830.

Substitution of H atoms by CH_4 groups greatly changes symmetry of molecule relative to disposition of atomic masses. Therefore, the questions arise: What are vibrational frequencies revealed in phosphorescence spectrum of methyl substitution products of benzol, their symmetries, possibilities of finding

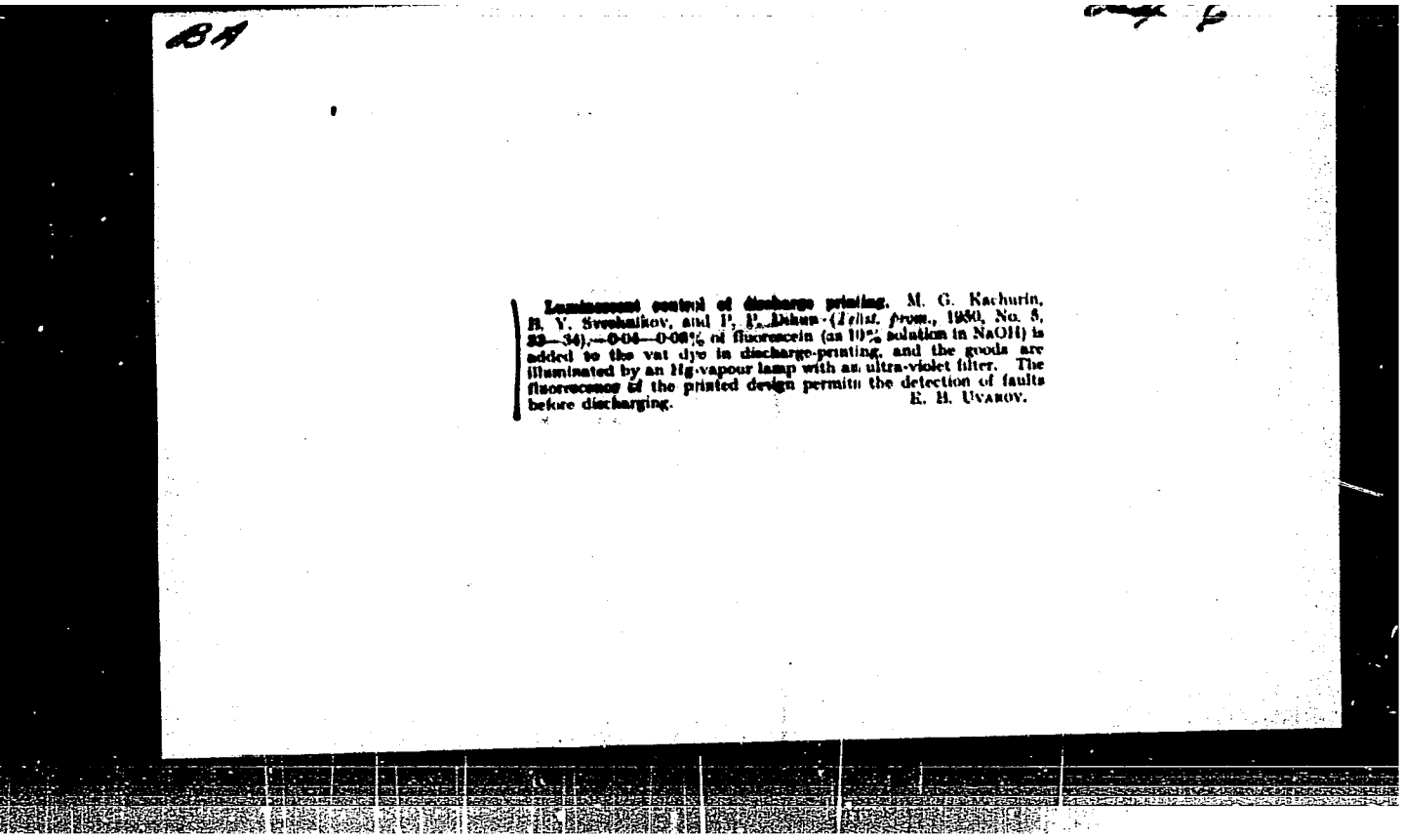
[redacted] 156T84

USSR/Physics - Phosphorescence (Contd)
21 Apr 49

clear laws by means of selection rule? Discusses these questions. Submitted by Acad S. I. Vavilov 14 Feb 49.

[redacted] 156T84

DIKUN, P. P.



Luminescent control of discharge printing. M. G. Kachurin, B. V. Sveshnikov, and P. P. Dikun. (*Tekst. prom.*, 1950, No. 8, 33—34).—0·04—0·08% of fluorescein (as 10% solution in NaOH) is added to the vat dye in discharge-printing, and the goods are illuminated by an Hg-vapour lamp with an ultra-violet filter. The fluorescence of the printed design permits the detection of faults before discharging. E. B. Uvarov.

CA

3

Phosphorescence of vapors of phenanthrene. P. P. Dikun. (State Optical Inst., Leningrad). *Zhur. Eksptl. Teoret. Fiz.* 20, 193-8(1950).—The simultaneous existence of 2 components of luminescent emission, one short- and one long-lived, at the moment of excitation, was investigated by detns. of the ratio of the total intensity of emission under continuous excitation, and the initial intensity of the phosphorescence. In Ac_2 vapor, that ratio was found = 1:1; consequently, there is only one long lived luminescence, and no fluorescent component. In contrast thereto, carbazole, fluorenone, fluorene, and phenanthrene vapors have both a short-lived and a long-lived emission. In phenanthrene, at 150°, the fluorescence and the phosphorescence spectra have practically the same structure; consequently, both emissions are detd. by the same centers. The decay of the phosphorescence is strictly exponential. The ratio of the total intensity under continuous excitation and of the initial intensity of phosphorescence at 280° is 4:1. The life τ of the excited state decreases with increasing pressure of the vapor and appears to be independent of the temp. Quenching of the phosphorescence does not take place, and the decrease of τ with increasing pressure is detd. by an increase of the probability of the transition from the metastable to the fluorescent state. The temp.-independence of τ indicates that even at 150° the majority of mols. in the metastable state have sufficient thermal energy to bridge over the gap between the metastable and the fluorescent levels, and that at higher temps. metastable mols. can remain at high vibrational levels of that state. The high stability of the metastable state is evidenced by the absence of quenching; at pressures corresponding to 10^9 collisions per sec., an excited mol. does not lose its excitation energy through conversion into thermal energy. A metastable mol. can only pass to the fluorescent state; that transition, from high vibrational levels of the metastable state, occurs after 10^8 collisions. N. Thon

USSR/Physics - Phosphorescence Feb 51

"Duration of Phosphorescence of Benzene and Its Derivatives," P. P. Dikun, A. A. Petrov, B. Ya. Sveshnikov

"Zhur Eksper i Teoret Fiz" Vol XXI, No 2, pp 150-163

Presents data obtained by authors and from lit on duration of metastable state of 60 benzene deriv and of 6 aliphatic ketones in soln at temp of liquid air. Shows, besides small exceptions, extinguishment const. is same in ultraviolet, blue and green bands and extinguishment law is nearly exponential.

LC

DIKUN, P.P. (Leningrad 112, Respublikanskaya ul., d. 3/50, kv.6)

Spectrophotometric method for determining the approximate concentration of 3,4-benzopyrene in mixtures of undertermined composition. Vop.onk. 1 no.4:34-38 '55. (MLRA 10:1)

1. Laboratoriya eksperimental'noy onkologii (zav. chlen-korr. AMN SSSR prof. L.M.Shabad) Instituta onkologii AMN SSSR (dir. chlen-korr. AMN SSSR prof. A.I.Serebrov)

(BENZATHRACENES, determination, spectrophotometric, in mixtures of undetermined composition)

EXCERPTA MEDICA Sec. 17 Vol. 3/3 Public Health Mar. 57

933. DIKUN P. P., SHABAD L. M. and NORKIN V. L. "Pollution of the atmosphere of industrial towns by 3:4-benzpyrene (Russian text) GIGIENA 1956, 1 (6-11) Tables 3

The quantity of 3:4-benzpyrene accumulated in snow during the winter months was estimated (chromatographically, by fluorescence spectra and spectrophotometrically). In a non-industrial quarter of Leningrad 0.2 mg./sq. m. was found after 6 months; in industrial quarters only exceptionally higher contents were established, max. 7.8 mg./sq. m. Cancerogenic substances apparently spread fairly evenly over the town. Outside the town the average was only 1/26 of the urban value. In the environment of an isolated factory the 3:4-benzpyrene content was after 75 days: at distances up to 300 m. 0.168 mg., up to 1,000 m. 0.039 mg., up to 1,800 m. 0.017 mg. and up to 2,500 m. 0.011 mg. per sq. m.

DIKUN, P. P.

VOYTELOVICH, E.A., DIKUN, P.P.; DYMARSKIY, L.Yu.; SHABAD, L.M.

Comparative study of the incidence of malignant tumors in Tukums District in the Latvian S.S.R. Vop.onk. 3 no.3:351-357 '57. (MLRA 10:8)

1. Iz Instituta onkologii AMN SSSR (dir. - deystvitel'nyy chlen AMN SSSR prof. A.I.Serebrov). Adres avtorov: Leningrad, P-129. 2-ya Berezovaya alleya, d.3, Institut onkologii AMN SSSR
(NEOPLASMS, statist.
in Latvia (Rus))

DIKUN, P.P.

Fluorescence spectral analysis of products of synthetic liquid fuel manufacture in order to detect 3,4-benzopyrene [with summary in English]. Vop.onk. 4 no.3:289-291 '58 (MIRA 11:8)

1. Iz laboratorii eksperimental'noy onkologii (zav.- chlen-korrespondent AMN SSSR, prof. L.M. Shabad) Instituta onkologii AMN SSSR (dir. - deystvitel'nyy chlen AMN SSSR, prof. A.I. Serebrov). Adres avtora: Leningrad, 129, 2-ya Berezovaya alleya, d.3/5, Institut onkologii.
(BENZOPYRENE)
(LIQUID FUELS--SPECTRUM)

GORELOVA, N.D., DIKUN, P.P.

Detection of 3,4-benzopyrene in certain species of smoked fish; fluorescent spectral analysis [with summary in English]. Vop.onk. 4 no.4:398-405 '58 (MIRA 11:9)

1. Iz laboratorii eksperimental'noy onkologii (zav. - chl.-korr. AMN SSSR prof. L.M. Shabad) Instituta onkologii AMN SSSR (dir. deystv. AMN SSSR prof. A.I. Serebrov).

(BENZOPYRENES, determ.
3,4-benzopyrene in smoked fish, fluorescent-spectral analysis (Rus)
(FISH,
same (Rus))
(FOOD,
same (Rus))

GORELOVA, N.D., DIKUN, P.P.

Detection of 3,4-benzopyrene in smoked and half-smoked sausage; fluorescent-spectral analysis. [with summary in English]. Vop. onk. 4 no.4:405-408 '58 (MIRA 11:9)

1. Iz laboratorii eksperimental'noy onkologii (zav. - chlen.-korr. AMN SSSR prof. L.M. Shabad), Instituta onkologii AMN SSSR (dir. - deystv. chlen. AMN SSSR prof. A.I. Serebrov). Adres avtorov: Leningrad, P-129, 2-ya Berezovaya alleya, d.3/5, Institut onkologii AMN SSSR.

(BENZOPYRENE, determ.
3,4-benzopyrene in smoked & half-smoked sausage, fluorescent-spectral analysis (Rus))
(MEAT,
same (Rus))

EXCERPTA MEDICA Sec 17 Vol 5/10 Public Health Oct 59

3140. INVESTIGATION OF THE AIR POLLUTED WITH 3:4-BENZPYRENE IN THE REGION OF PITCH-COKE WORKS OF OBSOLETE TYPE (Russian text) - Dikun P. P. and Nickberg I. I. Inst. of Oncol., AMS, USSR, Leningrad - VOPR. ONKOL. 1958, 4/6 (669-674) Tables 3

Results of the spectral analysis of samples of the polluted atmospheric air taken in a region with obsolete pitch-coke works lacking dust and gas catchers are presented. Sweepings of dust, as well as sedimentation and aspiration dust samples were analysed. The presence of the 3:4-benzpyrene and its concentration were determined with the method of Dikun. In all samples of dust, both sedimented from the air and obtained by the aspiration method, very high concentrations of 3:4-benzpyrene (0.03-0.05%) were established. After the reconstruction of the enterprise the general pollution of the air, particularly with 3:4-benzpyrene, sharply decreased (0.0003%). (V, 16, 17)

Iz laboratorii eksperimental'noy onkologii, Instituta onkologii AMN SSSR. Adres avtorov: Leningrad, 129, Kamennyy ostrov, 2-ya berezovaya alleya 3, Institut onkologii AMN SSSR.

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410410001-0"

GRUSHKO, Ya.M.; DIKUN, P.P.; SHABAD, L.M.; RUKAVISHNIKOVA, T.I.; ZAK, L.M.; VLASENKO, O.M.

Comparative study of air contamination by a cancerogenic substance (3,4-benzopyrene) in Irkutsk andAngarsk [with summary in English]. Gig. i san. 23 no.4:7-10 Ap '58. (MIRA 11:6)

1. Iz kafedry obshchey gigiyeny Irkutskogo meditsinskogo instituta, laboratorii eksperimental'noy onkologii Instituta onkologii AMN SSSR, Irkutskoy oblastnoy sanitarno-epidemiologicheskoy stantsii i Irkutskogo energeticheskogo upravleniya.

(AIR POLLUTION, determ.
by 3,4 benzopyrone in sampling of snow flakes (Rus))
(BENZOPYRENES, determ.
3,4 benzopyrene in sampling of snow flakes in air pollution determ. (Rus))

GORTALUM, G.N., DIKUN, P.P.

Determination of 3,4-benzopyrene in certain shale products and in sewage from the shale industry [with summary in English]. Gig. i san. 23 no.8:24-27 Ag '58 (MIRA 11:9)

(BENZOPYRENE, determination
in shale prod. & in sewage from shale plants (Rus))
(SEWAGE,
benzpyrenes in shale indust. (Rus))

SHABAD, Leon Manusovich; DIKUN, Pavel Polikarpovich; CHAKLIN, A.V., red.; KHARASH, G.A., tekhn.red.

[Pollution of the atmosphere by the carcinogenic substance 3,4-benzpyrene] Zagriaznenie atmosfernogo vozdukha kantserogennym veshchestvom - 3,4-benzpirenom. Leningrad, Gos.izd-vo med.lit-ry. Leningr.otd-nie, 1959. 239 p. (MIRA 13:3)
(Benzopyrene) (Air--Pollution)

to such

EXCERPTA MEDICA Sec 16 Vol 7/10 Cancer October 59

*4083. **Fluorescent-spectral analysis of the products of smoking** (Russian text) DIKUN P. P. and CHUSHKIN S. G. Inst. of Oncol. AMS, Leningrad *Vopr. Onkol.* 1959, 5/7 (34-38) Tables 2 Illus. 1

Three types of Russian cigarettes were analysed. In the smoke of all three, 3:4-benzopyrene was found (1.1 μg. to 2.6 μg. per 100 cigarettes). In the tar from the smoke the contents were 0.00003% to 0.00010%. In tobacco tar a percentage of 0.00024% 3:4-benzopyrene was found.

4084. **Statistics of smoking (small edition)**

GORELOVA, N.D.; DIKUN, P.P.

Detection of 3,4-benzopyrene in human lung tissue. Vop.onk. 5 no.8:161-164 '59. (MIRA 12:12)

1. Iz laboratorii eksperimental'noy onkologii (zav. - chlen-korrespondent AMN SSSR prof. L.M. Shabad) Instituta onkologii AMN SSSR (dir. - deystvitel'nyy chlen AMN SSSR prof. A.I. Serebrov). Adres avtora: Leningrad, P-129, 2-ya Berezovaya alleya, d. 5/3, Institut onkologii AMN SSSR.

(BENZOPYRENES chem.)
(LUNG chem.)

GORELOVA, N.D.; DIKUN, P.P.; LAPSHIN, I.I.

Determination of the presence (possibility of occurrence) of 3,4-benzopyrene in liquid smoke and in smoked products. Vop.onk. 5 no.9:341-346 '59. (MIRA 12:12)

1. Iz laboratorii eksperimental'noy onkologii (zav. - chlen-korrespondent AMN SSSR prof. L.M. Shabad) Instituta onkologii AMN SSSR (dir. - deystvitel'nyy chlen AMN SSSR prof. A.I. Serebrov) i Instituta narodnogo khozyaystva im. Plekhanova (dir. - A.I. Fefilov). Adres avtorov: Leningrad, P-129, 2-ya Berezovaya al., 3, Institut onkologii AMN SSSR (for Gorelova i Dikun; Moskva, Stremyannoy per., 28, Moskovskiy institut narodnogo khozyaystva (for Lapshin).

(BENZOPYRENES chem.)
(FOOD ADDITIVES chem.)

DIKUN, P.P.

Utilization of the fine structure of the fluorescence spectrum of 3,4-benzpyrene to increase the degree of authenticity of its findings. Vop. onk. 5 no.12:672-677 '59. (MIRA 13:12)
(BENZPYRENES)